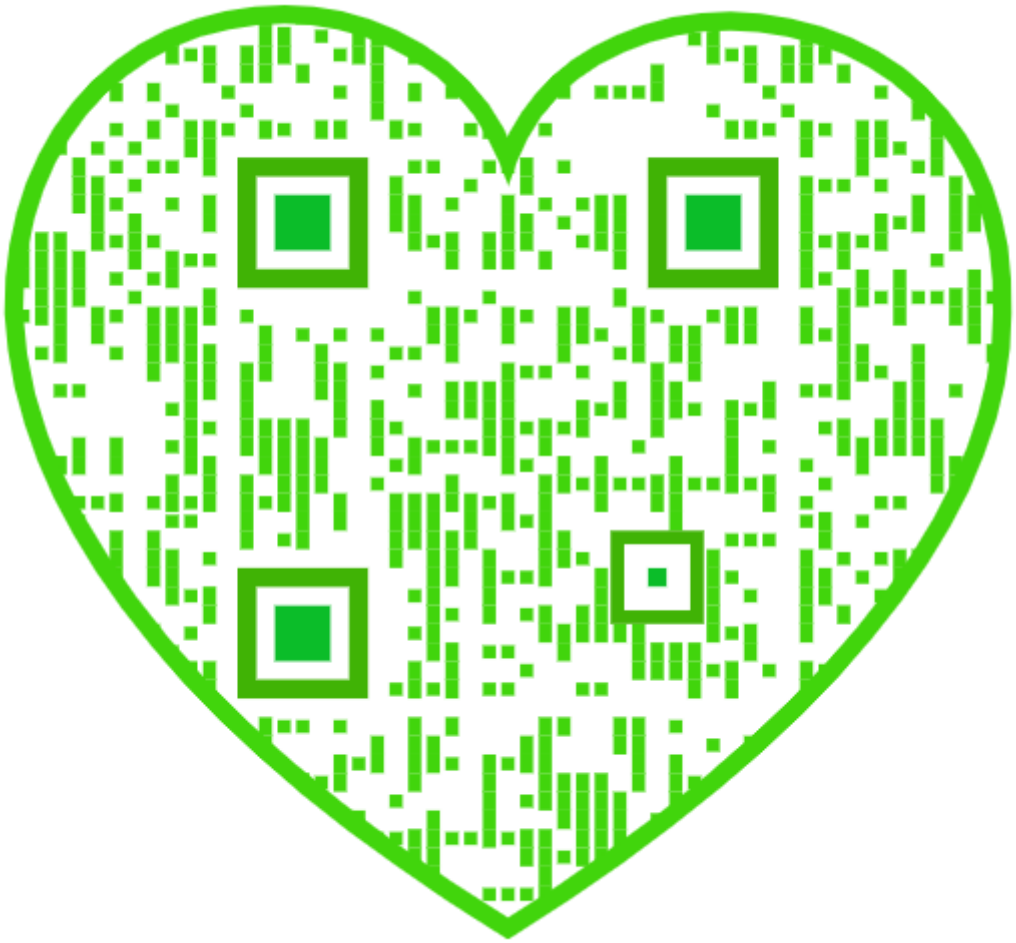

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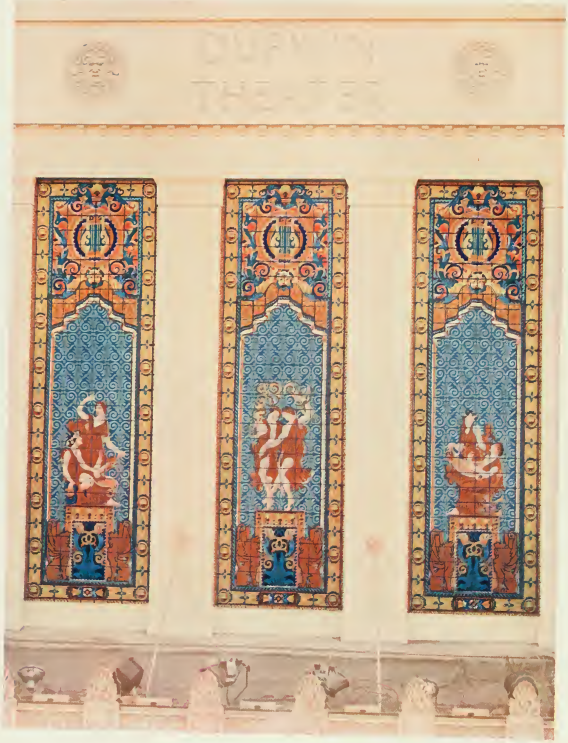

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we have spent too much of our time in trying to ape genius. For psychologists tell us we are creatures of habit. When we arise, what we eat, how we dress, how we meet people and even whom we meet, may be largely a matter of habit. If we behave according to the mode we are accepted as sane and moral. If we are to break away from customs, with any degree of success, we must become better than custom. We must develop a personality so intrenched in moral philosophy that it can become a law unto itself—setting aside and not needing the restrictions of custom. True genius does just this. In most respects, at least, it arises on a sound logical basis, above and beyond the ordinary. It is more truthful and more logical. Being essentially genuine, it is often simpler.

But men who ape genius do not understand its essentials. They recognize its difference only. To affect a personality or put themselves beyond custom, they adopt licentiousness or debauchery or braggadocio in a mistaken attempt at mental superiority. Recently a California school board was forced to discontinue the services of a licensed architect because he appeared before them in a bragging, intoxicated condition. And there are architects in some sections of our State who "just know" they can land school work if they can get bootleg liquor to the "right" trustees. What a travesty on education and architecture!

Ramona School, San Bernardino, California.
Witmer and Watson, Architects.
Masonry walls and floor—low cost and long wear.

But, thank Heaven, bravado and this type of petty indirect bribery are fast going out of style in architecture. The death knell rang a good decade ago, and today there are only a few of the old guard left vainly trying to practice architecture on a misconceived basis. For there is a healthy tang to the modern architect. He is coming to appreciate the intellectual and moral responsibilities of architecture. He is beginning to calculate the evangelical value of his product. For a building may be so designed as to be the greatest uplifting influence a given movement may ever have. Planning a new schoolhouse is the time for a revaluation of the school itself. New ideals, new forms of administration, new subject matter, should grow into realities through it. And so one of the prime requisites of adequate conception is a thorough and sympathetic understanding of function. Such a conception will make a draughtsman free. His solutions need not depend on custom—they go beyond custom, to the facts themselves! Many school systems today are publishing so-called "standards" for architects. These, as long as they do not become dictatorial and compulsory, are useful examples of successful functional arrangements. Our office publishes similar "standards," each accompanied by a descriptive sheet, explaining in detail why the solution is a good one. Such a standard should describe and illustrate essential functional needs to the architect. He is then free to think these needs into his work.

Looking over the plans of California schools as they come into our Sacramento office, one cannot help but feel a lack of interest on the part of some architects. In numerous cases there is a lack of enthusiasm for the problem. The attack is dead, stale and even careless. "It's only a dinky four-room school anyhow. What can we do with a central entrance and four classrooms punched so full of holes there's no building left? Shoot a little Spanish bull around the front entrance, Ralph, and let's get through and collect!" Such an attitude comes out of the architect's inability to see the opportunities of the problem. It is an attitude of desperation. But the opportunities are there, and the writer hopes the accompanying photographs illustrate some of the possibilities for developing their potentialities.

I think our architectural inheritance has a great deal to do with our conceptions. More than any country in the world, we are steeped in the classic tradition. Early American, Georgian Colonial, Adam Colonial, Christopher Wren's Georgian, Post Colonial, Greek Revival, Romanesque Revival, etc., are styles common to the architectural history of America. These and other styles used the "balance plan," and attempted classic detail. So pronounced has this influence been that there are architects in America today who have never drawn an unbalanced school plan. And in the Middle West, where Mr. Frank Lloyd Wright's influence has been strongest, we have ludicrous examples of classic or balanced plans all dolled up in Mr. Wright's "American" style, which came into being as a protest against the formal and traditional in architecture!

The geography of California means little to some of our traditional architects. North and south alike, pillared classical porticoes have been appliqued onto school buildings at the cost of good light and proper arrangement. Some of these rooms suffer like the one Mumford describes, where "the final ironic commentary upon the dignity and austerity of the earlier temples is illustrated in a house in Kennebunkport, Maine; for there the serene pillared facade is broken up in the rear by a later, and, alas! a necessary addition: a two-story bow window projected far enough beyond the eaves to give a little light to the occupants of the rooms!"

Today we are beginning to realize that architectural styles are nothing more nor less than the once good taste of someone who appreciated principles of design either actually or intuitively. We know that our emphasis on the facade rather than the mass, or the function, was in error. We are beginning to realize that methods of decoration involve proportion, color and appropriateness, and we refuse to be blindly dictated to by style. We have had some charming examples of late of houses using decorative elements from several styles, that are simple, artistic and beautiful. For the

Parkdale School, Los Angeles, California.
Note location of administration department.

first time we are beginning to feel the need for principles of design, as opposed to inherited style. Strange as it may seem, the public school has had a great deal to do with this idea. It has taught principles of design and color to millions of pupils. These, as men and women, have now gone into commercial fields, art, and architecture, with a new viewpoint.

When one comes to a consideration of those elements fundamental to the art of architecture, there are, I think, just two—principles of design and color. Design again separates itself into a study of forms and masses and consideration of the theories of decorative design. Years ago the method of teaching art was to copy the work of a great master. One copied his design, his delineation and his palette. Why he did what he did, we questioned little and cared less. Our sole idea was to paint in his mode. And then we became aware of Japanese and Chinese art! It did not balance. Its compositions were not based on the pyramid. It piqued us. It made us study and analyze and think. Professor Dow published his innocent little book on the principles of design, and we were at last awake to the need of discovering principles of design and working from them. We diagnosed color—pulled it all to pieces and found the influences of juxtaposition and proportion on various combinations. We found how we could combine pure rich colors, and how the range could be stretched until it included most of the rainbow. During all this time architecture was still copying. Of course, there were men like Sir Christopher Wren, who saw beyond his time, and intuitively felt the need to make classical wood assume its own proportions. And there were the brothers, Adam, who knew that the finished product had to be harmonious in all its parts. Our own H. W. Richardson had a great vision, but could not quite shake the romantic tradition off, nor see how steel columns and beams could be made into architectural worth. Many a budding genius must have been floored by the beautiful cast-iron mantel fronts, column capitals, garden statuary, etc., of that day.

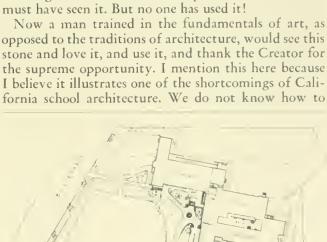
Today we are told that "form is the thing." That, at least, is a little nearer the truth. New skyscrapers, many of them crude and raw, are towering into being in our cities. One can't help but feel that too many of them stress form to the exclusion of decoration. Somehow or other we do not seem quite able to teach proportion, design and color as principles. And yet we have the knowledge to do this with. Some day I hope our schools of architecture will have classes dealing with the principles of form. I hope such classes will actually manipulate clay, cardboard or some practical medium, to express fundamental principles. I hope we will teach design in theory, and apply it to these forms in practice. I see us dealing with the fundamentals of color. Men so educated will be powerful—potent with a basic education that has made them sure and free. Men so educated would "feel" the possibilities of each job as it came to them.

I have just returned from a trip into North Central California. I saw literally mountains of disintegrated rock—cliffs composed of slab-like pieces that have fallen away into great slides. We stopped and picked up some of these natural step-stones. They varied from dark to light gray-browns and brown-reds. They were usually quite smooth on one side. We laid out a make-believe terrace about eight feet square. The effect was beautiful. Then we got reluctantly back into the machine and drove twelve miles to the nearest village. It had one new house—"Spanish style"—with concrete step-stones leading to the front door!

Near Alturas there are two kinds of building stone—a rather cold gray stone, and a volcanic stone in varied colors. The latter is beautiful. At one end of town there is an old jail built of it. It is dated 1886, I think, and about 16 feet square. The texture of this rock and its colors are superb. There are pinks and gray-pinks and blued pinks and one gray that, put next to the pink, looks greenish.

Several architects have worked in Alturas. There are two schools. One is built entirely of the gray stone, elects to attempt the classic, fails dismally, and depresses one as jail-like and foreboding. The other uses gray stone to a belt course about six feet above ground, and caps this with a very red locally burned brick. The gray, of course, does not go with the red, and the effect is again displeasing. There are several stolid gray stores in town and a plastered classical court-house fairly well done. One searches in vain for a house or a building that uses the beautiful pink stone. Architects must have seen it. But no one has used it!

Now a man trained in the fundamentals of art, as opposed to the traditions of architecture, would see this stone and love it, and use it, and thank the Creator for the supreme opportunity. I mention this here because I believe it illustrates one of the shortcomings of California school architecture. We do not know how to



Plot Plan, Beverly Hills Grammar School.

use our native materials. In many cases we are afraid to use them. We are afraid of texture, of roughness, and of truth. We have built "slick" buildings of manufactured materials for so long that we have educated the rural districts into demanding slickness. One architect naively admitted he did not dare suggest native material to the school board because "they would not appreciate its values." Years ago we built awful architectural abortions to suit the prevalent "mode." Are we to continue in this generation to build similar, if slightly less inocular, things? And this, because we are afraid to assume the leadership, the work "profession" implies.

In California the amount of money available for building is limited by law. It cannot be in excess of 5 per cent of the district's assessed valuation. They elect to vote money up to this limit, as they see fit. Some districts are too poor to build at all, and many of them must get lasting values. When an architect goes into a hot country strewn with usable field stone, and elects to build a wooden building, stuccoed, he is almost sure to have purchased a poor value for a poor district. Such a district cannot afford to foot the depreciation bill. I know of a district that voted its full 5 per cent. The architect designated a wood stuccoed building with a flat composition roof and "Mission" gables. That was thirteen years ago. The bonds were for twenty-five years. The roof went at the end of four years. The board trusted a local man to replace it and he did little better. During the first seven years the roof leaked in several places in every room and corridor. Then they bought a twenty-year guarantee roof. In the meantime the plaster on the gables started to drop off. This has been replastered from time to time, but still leaks. The wooden windows are 1½ inches thick. To hold them together under the heat shrinkage, an angle iron has been screwed onto the face of each. The "tower" has never been water-tight. The cement steps, leading to the main floor, 3 feet 6 inches above grade, are worn off dangerously. The cheap pine floors leading to the toilets have been replaced two times. The sun in summer and the rain in winter have combined to keep the school continually out of repair and money. About one block from this school is an old rubble-stone warehouse. It must be at least forty years old. It appears to still have its original split-shingle roof. Its windows are protected with rough board blinds. It is built of homely materials, but it is picturesque, solid and in reputable repair. A building of this type would have cost little more than the Mission one built—in service it would have saved the board the difference thrice over!

Besides being "afraid" of natural materials, architects have sometimes been so interested in "architecture" as to forget the simple dictates of climate.

In our State, on the coast, far to the north, there is a beautiful Spanish type school. It cost well over $350,000—enough money in this case to supposedly guarantee success. But the building is not a success. Its unwaterproofed walls have leaked or sweat in every room. It has open cloistered corridors. It is difficult to heat. The light in winter in many rooms is inadequate. There is mold in the library, and in many of the rooms. The Spanish grills do not allow sufficient sun to reach the toilets. They are cold, dank and carry an odor that seems impossible to eradicate. In short, this building would be beautiful and quite useful, if we could move it to sunny Southern California.

So tradition has dictated to art, and forced itself into incompatible climatic conditions. But this, as suggested heretofore, is not the end. Many, many times it has smothered function. Style has been chosen before the functions were known and then the teacher has been told that what he wants cannot be had, because it interferes with the design. Wasn't it Mr. McKim who withdrew from work on the Chicago Library building because the librarian's request for a few library conveniences interfered with Mr. McKim's conception of the thing as a public monument?

I think traditional training in architecture has made us unnatural. I am sure it often stresses unnatural factors, quite foreign to the functions that brought the building into need for being. Here again I feel we must go back to first principles. We must study the function till we feel the pulse of its needs. When this is not done, the building may start to shape itself in our mind. Traditional dictates, continually followed, would mean the eventual annihilation of architecture. It puts architecture in opposition to the function needing service. It makes it "unnatural" in another sense. From such misconceived viewpoints we have conjured up beautiful temples, and stuffed education into their preconceived and restricted forms; we have set these buildings well back on the site, for the effect, and in doing so destroyed the playground; we have placed them on hilltops, where there was no level playground and where they could not be added onto, and we have used them to complete a civic center scheme, or terminate a view in territory where children were few, and a school did not belong!

Of these phases of such shortcomings that of dealing with "overbuilding," or poor selections of what to build, is the most serious. Grandiose schemes may seem very important to the architect at the time. And they will usually fool the public once—but that is usually the end. In all parts of our State one can find cases where taxpayers have voted money for a building and received half a one. When they are asked for the money to complete things with, they invariably refuse. Apparently you can fool them just once. After that it's often impossible to carry a bond issue for from fifteen to twenty years. And in the meantime education suffers from inadequate housing and a loss of leadership.

So a proper interpretation of function is essential. Let us illustrate. A certain rural high school voted $300,000 for a complete new school plant. The architect laid out a wonderful scheme into which he intended to fit the areas needed. There was a large central building, curving wing arcades connecting to two minor masses on each side, and a beautiful Florentine tower. Shops, gymnasium, domestic art, bus sheds, etc., were to go in the rear. As the building plans progressed it became increasingly evident that some of these buildings must be omitted. The architect explained how essential the front facade and garden approach was. The board acquiesced. When the money was finally spent the board woke up one day to find themselves possessed of a plant very beautiful and impressive, but without a gymnasium, gymnasium dressing rooms, a pool (for this happened to be in a very hot climate), shops, and auto bus sheds. This additional housing, it seemed,

would now cost $120,000. The board went to the people, requesting the balance. That was fourteen years ago, and they have requested twice since, without avail. In the meantime, they found it necessary to employ one extra full-time janitor and a part-time gardener to keep up this expensive scheme. A "reaction" board is now in office and they are figuring just where the money to paint this spread-eagle scheme is to come from. The farmer-taxpayers of the district have given two reasons for refusing the school more money—

1. The first money was for a complete plant. They did not get it. What guarantee have they that the next lot will complete things?

2. The accommodations wanted are fancy rooms! Why isn't out-of-doors a good enough place to play? Why should they furnish pupils with free swims? Shops are not needed. If boys want shop work, let 'em quit school and go to work!

If the original plant had been built after a careful survey and each department received its just share of housing, the above situation need not have developed.

For a long time I have felt the need of a defined architectural relationship between communities and their wealth. Money privately spent illustrates the layman's ideas of what is appropriate. Money publicly spent should illustrate the ideals of community leaders plus architectural advice. In general this should express a maximum value for the money spent—values in the aesthetic, in functional usefulness, and in wear. In considering wear we are again faced with the long wear often secured from natural materials. Another phase of wear is protection against the unusual, such as earthquakes, poor soil conditions, strong winds or sandstorms. Most of the concrete buildings coming into our office do not contemplate earthquakes, although they are repeatedly located along the fault lines. They are presumably drawn with good intentions, and erected with a prayer. No architect would intentionally harm a little child! Why, then, are we so willing to be careless?

Perhaps our greatest fault is an unwillingness to assume the responsibilities of leadership. To me this seems so futile, especially when every great architect about us has become so, just because he has put art, and quality, and care, above each passing opportunity. His work, his character and his name have come to stand for service and dependability.

The Division of Schoolhouse Planning in California's Department of Education was brought into being to foster better schools. The need of such a division was sponsored by former State Superintendent of Schools Will C. Wood. In his thirty-second biennial report Mr. Wood says in part:

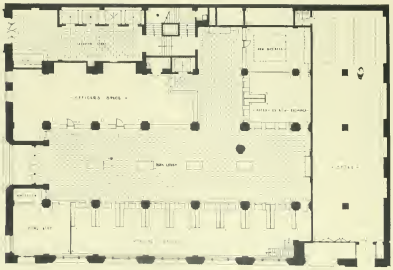
> In my last biennial report, I pointed out the tendency to waste public money in poorly planned school buildings, and in overelaboration and overadornment of schoolhouses. . . . The planning of school buildings is a highly specialized and technical business, involving not only a knowledge of architectural design, building stresses and strains, and the preparation of specifications, but also a good knowledge of school administration, school hygiene and the sciences underlying the heating and ventilating of large buildings.
>
> The inexperienced school architect sometimes wastes as much as a quarter of the cubic contents of a building in such extravagances as hallways and stairways of unnecessary dimensions, and in unnecessarily large rooms. One must understand how a school is organized and conducted to plan a school building successfully. We have reached a point in California where we should no longer let architects learn at public expense how to plan schoolhouses by experimenting and making costly errors.
>
> Another great saving can be made by making accessible to school boards information about estimating the amount of money that should be put in a school building construction program, and about the issuance of bonds. Too frequently a school board facing the need for new buildings has no advice on its building program before bonds are voted. The board members guess at the amount of money required, and because of inexperience in schoolhouse planning and construction, they usually make very poor guesses. . . .
>
> In view of the need for professional assistance to school boards in the planning of school buildings, I recommended that a Division of School Planning be organized in the State Department of Education whose function shall be to advise school boards in their planning of capital outlays and in preparing for the issue of bonds. Such division should be in charge of a competent expert in school planning and should be financed in part by the State and in part by the districts concerned.

This division is now in operation. It is in no sense a plan-signing bureau. On the other hand, we are making every effort, through research and extensive experience, to uncover data needed in school planning. Schedules, room standards, type layouts, etc., are now procurable as architects need them. The division assumes that architects, school boards and taxpayers are all alike searching for beautiful, useful schools at reasonable prices. To this end we are working. If we are to succeed in rendering service, we must have consultation with architects *while their work is in its preliminary* conception. Cooperation at this time permits of fundamental diagnosis and solutions that approach the ideal. Consultation on plans that have reached partial, or entire, maturity is costly to the architect, and unfair to the owner and the division. The division stands for ideals. So does every red-blooded California architect. Our work is new, and our acquaintances and contacts are not entirely consummated. We hope, through this article, to gain an acquaintance with many architects we have not met as yet. The criticisms included herein are written after one year of administration. They are meant to be constructive, and to stress what we believe to be serious problems of the profession. They do not represent sporadic, occasional cases, but rather problems that occur again and again.

We are too careless in our study of function. We are afraid of simple materials that are not "slicked up" in the standardized manner. We often neglect to take climate into consideration. We are often careless of thorough construction. And combined with these lacks is an apparent inability to take what function gives us, and design for it what it is. I know this is not a fair criticism of the work of our best architects. But it is just in relation to what we have actually had in California in the name of architecture.

So the Division of School Planning pleads for your cooperation. Its service represents research in the educational needs of schools. It attempts to collect good solutions of layout, orientation and arrangement; examples of functional room layouts, and collections of details, particularly adaptable to school needs. The writer as chief of the division is forced to be about the

(Concluded on page 38)



SAN DIEGO TRUST AND SAVINGS BANK BUILDING, SAN DIEGO, CALIFORNIA.
WM. TEMPLETON JOHNSON, ARCHITECT.

Photo by H. K. Fisch

BANKING ROOM, SAN DIEGO TRUST AND SAVINGS BANK, SAN DIEGO, CALIFORNIA.
WM. TEMPLETON JOHNSON, ARCHITECT.

Photo by H. R. Fitch

Theatrical Theaters

BY HARRIS ALLEN, A. I. A.

THE FACT that one is masked as a cathedral, another as a skyscraper, does not worry the owners of the two theaters which are here illustrated. It is not at all inappropriate. Huge illuminated signs proclaim that these buildings are not what they seem; that they are temples, not to creed or commerce, but to the worship of make-believe. They are advertisements for their own wares.

They express their function, then, though it may be in a paradoxical manner. And each, according to its own (bright) lights, is consistent in carrying out the vehicle of architectural stylisticness it has chosen for the wagon to which its stars are hitched.

The Carthay Circle Theater is extremely picturesque, both by day and by night, and its location, set in a sort of civic center, together with its color scheme of gleaming white accented by spots of brilliant tile, assures its receiving public attention without the necessity of overloading it with ornament. That would indeed be gilding the lily. However, there is quite enough vigorous Spanish detail to determine its character; and the interior treatment has a similar spirit. Comparatively plain except for grouped spots of definitely Spanish ornament and a circular ceiling whose radiating, interlacing panels are approximately Mudejar, it relies principally on color and boldness of scale for its effect—and secures it.

United Artists Theater, Los Angeles, California.
Walker and Eisen and C. Howard Crane, Architects.

Question its architectural morals if you will; but the fact remains that the building is undoubtedly a success as a solution of a given problem—a spectacular success; and carried out consistently and cleverly. And for all its theatrical posing, there is a certain effect of simplicity, even of sincerity about it—well, it is quite confusing, or to use the popular word of the hour, intriguing; and so, again, a success.

The United Artists Theater is a bird of a different feather; but it, too, has doubtless accomplished its object. Its terra-cotta embellishments outshine all its neighbors, its tower (euphemistically called a roof sign) rears proudly above all the surrounding tanks and pent-houses. Everyone knows it is there.

Continuing this supremacy over all rivals, there dawns upon the delighted but awed (I am sure they must be awed) movie fans a scene of truly regal magnificence when they enter these pulchritudinous portals, and with each step inward the setting is more and more gorgeously theatric until the Holy-of-Holies is reached, than which there could not possibly be anything which would not be an anti-climax. It is the grand finale, with all the brasses and strings and winds at their utmost fortissimo. Words cannot describe, pictures but faintly suggest, the orgy of ornament of groined vaults and crested canopies, of golden grillage, of splendid stenciling—and all hanging well together in a general consistency of treatment that might be called a Super-Spanish-Gothic—at any rate, it's simply (no, not simply, magnificently) swell, and the effect upon the public must be stunning—a regular K. O.

Therefore this, too, is a success as a required solution, a theater which is more of a theatrical stage setting than any scene which could be set back of its own proscenium arch, an advertising song without words. Who would be so rash as to overlook the skill and pains it took to produce this masterpiece of scenic decoration and deny that it is an achievement?

* * *

In connection with the three-day exhibition of the Twenty-first Paris Prize Drawings in the exhibit rooms of the Architects' Building, Fifth and Figueroa streets, a dinner was given for members of the Los Angeles Atelier of the Beaux Arts Institute of Design of America.

The first prize, four years of study at the Ecole des Beaux Arts in Paris, was won by Thomas Locroft of the Catholic University of America. The winning of the Paris prize is the highest honor that can be awarded to an American draftsman. The subject of the competition this year is a great supreme court building, facing a large plaza and the head of memorial bridge. The structure in its ideal setting makes the entire conception one of extreme interest.

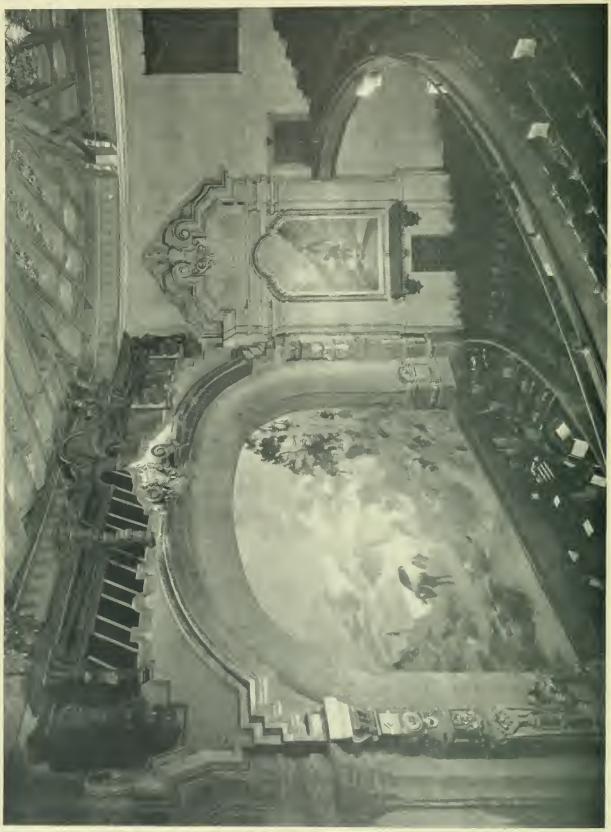
CARTHAY CIRCLE THEATER, LOS ANGELES, CALIFORNIA.
DWIGHT GIBBS, ARCHITECT.

CARTHAY CIRCLE THEATER, LOS ANGELES, CALIFORNIA.
DWIGHT GIBBS, ARCHITECT.

Photo by Padilla Co.

MURAL DECORATION, CARTHAY CIRCLE THEATER, LOS ANGELES, CALIFORNIA.
DWIGHT GIBBS, ARCHITECT. FRANK TENNY JOHNSON, ARTIST.

Photo by Padilla Co.



PROSCENIUM ARCH, CARTHAY CIRCLE THEATER, LOS ANGELES, CALIFORNIA.
DWIGHT GIBBS, ARCHITECT.

Photo by Padilla Co.

PROSCENIUM ARCH, UNITED ARTISTS THEATER, LOS ANGELES, CALIFORNIA.
WALKER AND EISEN AND C. HOWARD CRANE, ARCHITECTS.

Photo by Max Seeble

ORGAN SCREEN, UNITED ARTISTS THEATER, LOS ANGELES, CALIFORNIA.
WALKER AND EISEN AND C. HOWARD CRANE, ARCHITECTS.

Photo by Matt Studios

FOYER, UNITED ARTISTS THEATER, LOS ANGELES, CALIFORNIA.
WALKER AND EISEN AND C. HOWARD CRANE, ARCHITECTS.

Photo by Mott Studios

LOBBY, UNITED ARTISTS THEATER, LOS ANGELES, CALIFORNIA.
WALKER AND EISEN AND C. HOWARD CRANE, ARCHITECTS.

PROSCENIUM ARCH, DUFWIN THEATER, OAKLAND, CALIFORNIA.
WELKS AND DAY, ARCHITECTS.

Photo by Walter and Hughes

DUFWIN THEATER, OAKLAND, CALIFORNIA.
WEEKS AND DAY, ARCHITECTS.

Photo by Waters and Hainlin

A Review of Lacquer Specifications

BY HUGO ZELLER
President, Zeller Lacquer Manufacturing Company, Inc.

IT IS indeed encouraging to be asked by the editor of this magazine for another paper on the subject of architectural lacquer grades. The request implies that my rather general remarks recently published in these pages evoked some degree of interest.

And, after all, why not? Why shouldn't the modern architect find an interest—I might say a primary and vital interest—in finishing materials which *per se* eliminate so many of the difficulties and disadvantages that heretofore have inescapably attached themselves to the task of finishing interior woodwork, metal work, and plaster walls!

A brief examination of the questions which usually come up in connection with writing lacquer specifications takes you directly to the heart of several aspects of lacquer finishing with which every architect ought to be acquainted. I have found in conversation with a large number of prominent architects that there still appears to be in the minds of some a lingering sense of mystery concerning the practice of lacquer finishing, with a mistaken idea that setting up specifications is a complicated job. The fact of the matter is that writing specifications for lacquer finishing is as simple and easy as writing specifications for any other finishing materials, and a great deal easier than most.

Due to the numerous requests from architects for information and suggestions as to writing lacquer specifications, our firm last summer prepared a form, or standardized set of specifications, for circulation to architectural offices. In reviewing the more important questions pertaining to specification writing, I can do no better, perhaps, than to set before you a summary of this form, which a number of friendly architects have been good enough to call comprehensive and informative.

In passing, I might mention that we have received more requests for information concerning lacquer finishing from the architects of the Pacific Coast than from any other one part of the United States. Apparently, you Pacific Coast men are more widely awake to this most modern of finishing materials than your contemporaries in other sections.

Under the heading of woodwork and trim, we are advising architects to touch upon the following points: Open grain woods should be filled with a filler suitable to lacquer finishing. Clear wood sealer (lacquer) is then used. Oftentimes this work is done at the mill, as is the back priming, on account of better conditions for application and a consequent greater economy. After the sealer, if equalization of stain is necessary, the tinting or glazing lacquer is used. Where a rubbed finish effect is required, however, the satin wood lacquer should then be employed, usually in two coats. If a glossy, natural-wood finish is desired, the staining and filling operation is followed by two coats of the clear wood lacquer. Either of these finishes can be rubbed as may be desired. The number of coats used depends on the wood employed and the final finish desired. Where an opaque finish is required, the architect's specifications should call for one coat of clear wood sealer and two coats of the architectural lacquer enamel grade, in any color or shade that may be preferred.

It is fortunate that lacquer grades have at last been produced which eliminate all risk and uncertainty from the work of application. Untrained finishers become thoroughly conversant and efficient with the grades and their application in a surprisingly short time. Though the use of architectural lacquer grades is a departure from the use of materials heretofore employed, the lacquer grades and their application are so simple that almost anyone can become proficient in a short time.

When we come to the lacquer finishing of plaster walls, the architect is now enabled to specify, with confidence, lacquer grades which for applicability and appropriateness have been definitely proved in a number of prominent West Coast buildings. These grades, especially developed for finishing both smooth and sanded walls, are applied to specifications which may be summed up as follows:

The plaster wall *first coater* grade, with its extraordinary building, hiding and covering properties, is prepared in modifications that are intended to meet the various conditions of heat and moisture in the plaster. The first of these was formulated for old or entirely dry walls; the second, for comparatively new walls, which are fairly dry without heat; and the third, for walls recently plastered, where the matter of heat and moisture are very definite factors to be considered. In the specification and use of the architectural plaster grades, one coat of this *first coater* should be applied in that modification which is required by the existing condition of the plaster.

This is followed by a coat of the plaster wall intermediate or *second coater*. For ordinary commercial finishes, this is the final step. Sometimes it is desired to carry the finishing effect even further, and for such cases the architectural plaster wall *third coater* should be specified for the final coat, particularly when the finest finish and utmost depth are desired. Ceilings receive similar treatments, depending on the conditions and the effects desired. Architects are advised to specify the *third coater* in cases where stippling, glazing, antiquing, highlighting, etc., are desired.

There remains only the consideration of miscellaneous details. Metal fire doors, for instance, if not primed at the factory, and assuming that the metal is smooth enough so that no filler is needed, are treated with a coat of the special primer, followed by one or more coats of the architectural lacquer enamel, which provides either a final finish or, where desired, a base finish for graining. On hardwood floors, no more durable finishing material has ever been produced than the architectural

glossy wood lacquer which we are recommending for this use, two coats ordinarily being sufficient when applied over a coat of the architectural clear wood sealer; and for concrete floors, a satisfactory finish is obtained with the architectural concrete floor enamel. In the finishing of metal trim and windows, the same steps are specified as I have described for metal fire doors.

It may be in order to mention that these lacquer grades are all prepared ready for use and require no mixing on the job except tinting of some grades where desired. Their ready-to-apply character makes the materials practically fool-proof, and with proper equipment and reasonable intelligence, objectionable defects such as roughness (better known as "orange peel"), runs, drips, etc., are eliminated, giving assurance of absolute uniformity of finish. Only the most ordinary precautions are needed to get extremely satisfactory results.

If in this present article I may seem to have drawn largely on the intimate experience of my own organization, I may be pardoned in the light of our activities in this field. We had the good fortune to participate in the development of interior finishing with lacquer grades from the outset. We had the pleasure of cooperating with architects and contractors in the finishing of many large, modern buildings, with gratifying success.

I will say for lacquer that nothing can stand in the way of its progress. Consider only one of its many advantages—the time saved from beginning to end of the job. I know that I reiterate, but I do so advisedly, when I remind architects that with these lacquer grades it is possible to get unmatchable finishing effects under conditions of building construction which would hold up the work of any other finishing materials known, and yet do the work in such short order that occupancy of the building will be considerably earlier than otherwise possible, since the finishing time with lacquer grades, such as above mentioned, is one-third to one-fifth of the time required with any other finishing materials. In some cases the extra rental income so gained has actually defrayed the cost of the finishing job.

In the foregoing brief article I have attempted to give only an outline of salient points on the writing of lacquer specifications. However, I will be most happy to give readers of the PACIFIC COAST ARCHITECT what information I can on any phase of interior lacquer finishing which they may care to request.

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ARCHITECTURE OF CALIFORNIA SCHOOLS

[Concluded from page 15]

State a large portion of his time. If requests are sent in well ahead of time, it is often possible to call on architects in their office. Once in two months office hours are kept in the Los Angeles office, for the convenience of Southern California architects. Our aims are threefold—to render service to architects, to establish and illustrate fundamental principles, and to leave planning in the hands of the architect. With the real needs of education uncovered, architects are all free to think in functional terms. Each will develop his own ideas, and California school architecture can become logical and fecund, and pulsing with a new virility.

LE BRUN TRAVELING SCHOLARSHIP COMPETITION, YEAR 1929

The Executive Committee of the New York Chapter of the American Institute of Architects, as trustees of the Traveling Scholarship, founded by Pierre L. Le Brun, announces a competition for the selection of a beneficiary. The program will be issued about January 15, 1929, calling for drawings to be delivered about March 15, 1929.

The following excerpts from the deed of gift explain the award and conditions:

Fourteen hundred dollars . . . is to be awarded, . . . to some deserving and meritorious architect or architectural draughtsman, resident anywhere in the United States, to aid him in paying the expenses of an European trip, lasting not less than six months.

The selection of the beneficiary of the scholarship is to be by means of a competition . . . and the drawings called for . . . are to be submitted for examination and judgment to a jury consisting of at least three practicing architects, no one of whom is to be connected with any school or atelier for the teaching of architecture. In making the award the jury is to give a full and careful consideration to the records of qualification filed by the competitors as well as to the comparative excellence of the drawings submitted.

Any architect or architectural draughtsman, a citizen and resident of the United States, not under twenty-three or over thirty years of age, who shall, for at least three years, have been either engaged in active practice, or employed as an architectural draughtsman and who is not and has not been the beneficiary of any other traveling scholarship, shall be eligible to compete.

Every competitor must be nominated by a member of the American Institute of Architects, who shall certify in writing that the above conditions are fulfilled, and that in his opinion the competitor is deserving of the scholarship. No member of the Institute shall nominate more than one (1) candidate.

Every competitor must engage to remain, if successful, at least six months abroad and to devote well and truly that length of time to travel and the study of architecture otherwise than by entering any school or atelier or attending lectures, it being intended that the benefit derived from this traveling scholarship shall supplement school or office experience.

The successful competitor shall write from time to time, but not less than once every two months, to the New York Chapter of the American Institute of Architects, giving an account of the employment of his time.

All those wishing to enter the competition should arrange at once for nomination by a member of the American Institute of Architects. Nomination blanks can be had of the secretary of any Chapter, A. I. A., or of the Le Brun Scholarship Committee. Nominations should be sent, so as to be received before January 15, 1929, to Le Brun Scholarship Committee, Room 530, 101 Park avenue, New York, N. Y.

OTTO R. EGGERS, *Chairman.*

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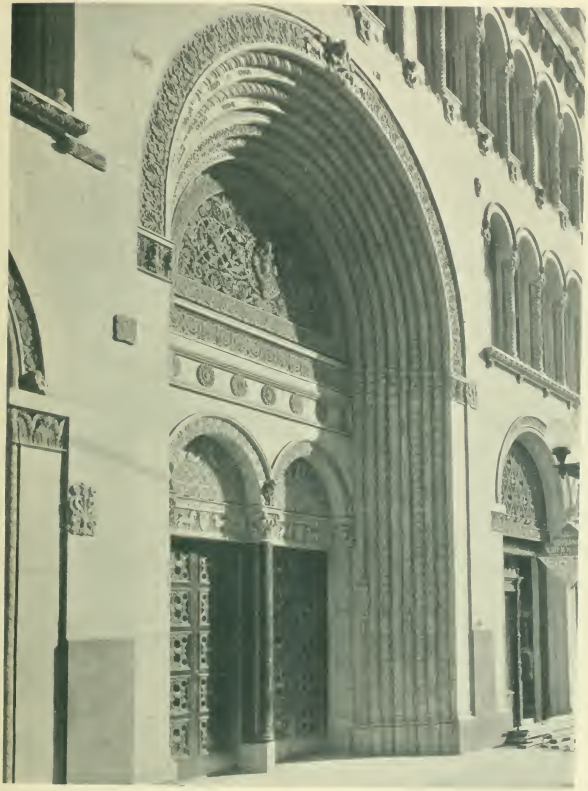
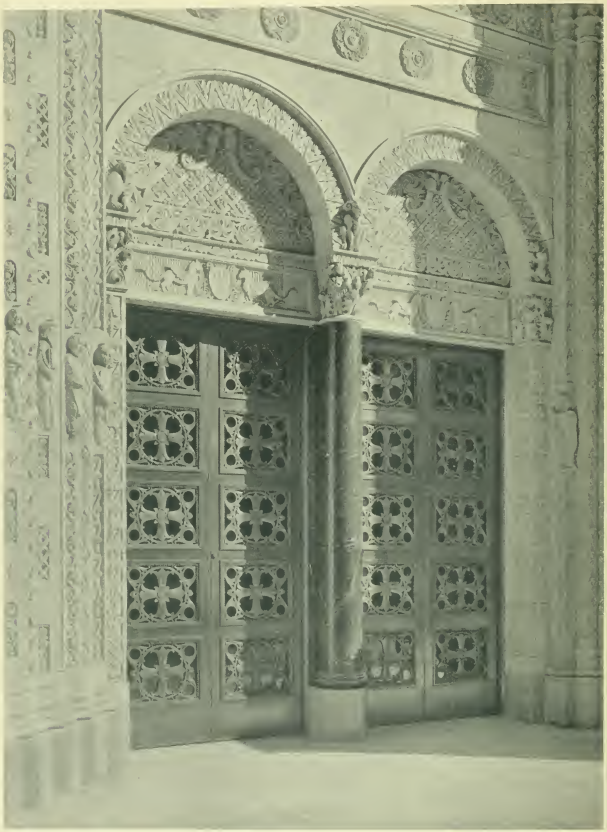
OIL-BURNER BOOKLET

An interesting folder has been prepared by the Pacific Oil Burner Association outlining the purpose and plans of the association. Helpful information regarding specifications of oil-burning equipment is given, together with other data. The correct A. I. A. file number is imprinted and copies may be secured by addressing the association office at 544 Market street, San Francisco, or from individual members.



ENTRANCE, FINE ARTS OFFICE BUILDING, LOS ANGELES, CALIFORNIA.
WALKER AND EISEN, ARCHITECTS.



ENTRANCE DOORS, FINE ARTS OFFICE BUILDING, LOS ANGELES, CALIFORNIA.
WALKER AND EISEN, ARCHITECTS.

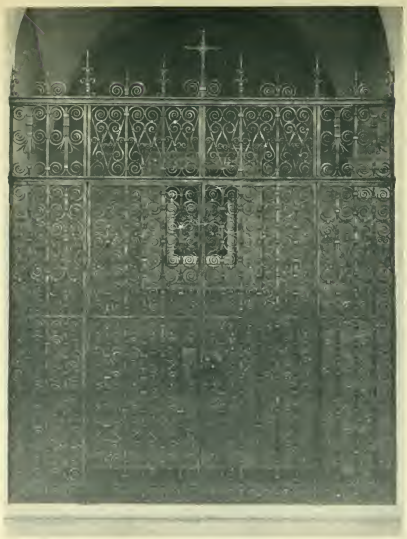
Photo by Mott Studios

ENTRANCE LOBBY, FINE ARTS OFFICE BUILDING, LOS ANGELES, CALIFORNIA.
WALKER AND EISEN, ARCHITECTS.

Photo by Mott Studios

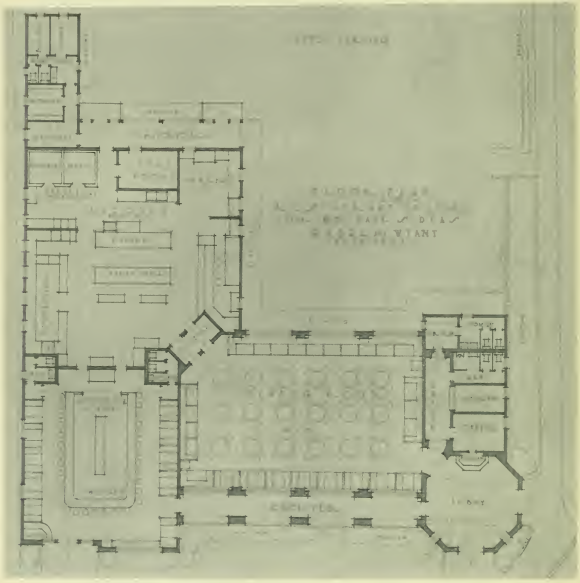
DETAIL AT LOBBY MEZZANINE, FINE ARTS OFFICE BUILDING, LOS ANGELES, CALIFORNIA.
WALKER AND EISEN, ARCHITECTS.

Photo by Mott Studios



GATE, ST. ANDREW'S CHURCH, LOS ANGELES, CALIFORNIA.
ROSS MONTGOMERY, ARCHITECT.

GATE, SAN DIEGO TRUST AND SAVINGS BANK BUILDING.
WM. TEMPLETON JOHNSON, ARCHITECT.



DYAS-CARLETON CAFE, LOS ANGELES, CALIFORNIA. GABLE AND WYANT, ARCHITECTS.

Photo by Mott Studios

DYAS-CARLETON CAFE, LOS ANGELES, CALIFORNIA. GABLE AND WYANT, ARCHITECTS.

Photo by Mott Studios

DYAS-CARLETON CAFE, LOS ANGELES, CALIFORNIA. GABLE AND WYANT, ARCHITECTS.
Photo by Mott Studios

INTERIORS, DYAS-CARLETON CAFE, LOS ANGELES, CALIFORNIA.
GABLE AND WYANT, ARCHITECTS.

Photos by Mott Studio.

RESIDENCE OF MR. H. W. THORNE, SAN MARINO, CALIFORNIA.
WEBBER, STANTON AND SPAULDING, ARCHITECTS.

Photo by Mott Studios

DETAIL, RESIDENCE OF MR. H. W. THORNE, SAN MARINO, CALIFORNIA.
WEBBER, STANTON AND SPAULDING, ARCHITECTS.

Photo by Mott Studios

MODELS OF RESIDENCE FOR DR. GEORGE PINESS, LOS ANGELES, CALIFORNIA.
HETH WHARTON, ARCHITECT. MERRILL WYNANT, MODELER.

NOTE: The vigorous and realistic treatment of this model is commendable. It is obvious that such a presentation is bound to be more satisfying and illuminating to the layman client than any number of the most brilliant perspective sketches.

J. D. SPRECKELS BUILDING, SAN DIEGO, CALIFORNIA.
JOHN PARKINSON AND DONALD PARKINSON, ARCHITECTS.

The San Diego Trust and Savings Bank Building

[See pages 16, 17 and 35]

THE San Diego Trust and Savings Bank Building, now nearing completion at the northwest corner of Sixth street and Broadway, has a frontage of 100 feet on Broadway and 150 feet on Sixth street. It is in every sense a modern, up-to-date structure. During the past fifteen years many changes have taken place in office building construction in the United States. In designing the building, the officers of the bank and the architect have taken full account of the latest trends in construction to secure the maximum of light and air with the minimum of waste on unrentable space. The elevators, of higher speed than any others in San Diego, insure rapid transit to all floors, and the ample, well-lighted corridors with wainscots of pink Tennessee marble make a pleasant approach to the offices. An interesting and unusual feature is that it is the first office building in California to be constructed with extra long splicing plates on columns, below the center of gravity. A double quantity and double-size rivets were used, and thirty tons more steel was used than is required by any underwriter. It is a steel-frame building, in the construction of which more than 1500 tons of steel were used. All windows are steel as well.

When the preliminary plans were finished the bank officials and the architect, William Templeton Johnson of San Diego, held a two-day conference with a committee of six members of the Building Owners' and Managers' Association, which made valuable suggestions for the carrying out of the final drawings—the first time that such a service has been used in the erection of an office building in San Diego.

The style of architecture is Lombard Romanesque, which makes it possible through the use of pier columns and arches to accent strongly the vertical lines of the building. Up to the level of the second floor, about forty feet above the sidewalk, the exterior is Briar Hill sandstone, a very beautiful stone of remarkably varied and interesting color used for the first time on the Pacific Coast. Above the second floor the building is faced with terra cotta of a warm buff, blending successfully with the color of the sandstone. The richly decorated arcaded cornice is capped with tile and is of slight projection, thus securing adequate light for the upper tier of windows. Above the cornice the base of the tower contains two floors of offices, the water tanks and elevator machinery, which are hidden below the roofs of tile. Over the whole rises the tower itself and the beacon light, the copper finial being 243 feet above the sidewalk and constituting a landmark in the skyline of the city.

The office building entrance on Broadway is provided with a spacious lobby with wainscot of Siena marble and Tennessee marble floor. The lobby is to be decorated with mural paintings. Bronze gates separate it from the entrance to the safe deposit vaults and the secondary entrance to the bank. The elevator doors are sculptured bronze.

All of the office building corridors, stairways and toilet rooms have marble floors. There are marble wainscots in the corridors and tile in the toilet rooms, which are provided for men and women on every floor. All glass partitions are Pyramid plate glass, and the woodwork is Southern gum stained a dark walnut color. Corbin cast bronze hardware is used throughout. All the partitions are hollow terra cotta tile. The offices have concrete floors and plaster walls and ceilings, the partitions being arranged in such a flexible manner that the wants of the most exacting tenant may be fulfilled. Above the third floor, the partitions have been entirely omitted on every other floor for the present so that floor space may be divided to suit the taste of those requiring a large undivided area. The rentable floor area is approximately 93,000 square feet.

BANKING QUARTERS

The San Diego Trust and Savings Bank will occupy the basement, first and mezzanine floors, with the exception of a single unit which is being leased for a store on the Sixth-street front. The space which the store will occupy can later be added to the bank space, without difficulty, and will then provide another entrance to the bank, besides giving it increased space.

The main banking quarters will be located on the ground floor, with a full-height floor occupied by the trust department above it. The manager of the building, S. P. Cantrell, whose experience has been wide in San Francisco office buildings, plans to designate these three levels of the bank's quarters as "Bank," "Trust Department" and "Deposit Boxes," to gain constant publicity for these three services, while avoiding the somewhat incongruous and less attractive terms, "main floor," "mezzanine" and "basement."

The basement contains the safe deposit vaults equipped with all the latest safety devices. Ample coupon booths and committee rooms are provided, storage rooms for bulky articles and a commodious restroom for ladies. The basement has locker and dressing rooms for the officers and employees of the bank. Besides these rooms, provision is made for all the mechanical and electrical equipment.

The main banking room, entered from Broadway through a deeply recessed archway, harmonizes in architectural style with the exterior. Below a decorated ceiling 32 feet above the floor, marble, bronze, stone and iron are used to create a bank interior second to none on the Pacific Coast. Marble and bronze are used for all the bank fixtures and nearly twenty marbles chosen for their color are employed for small columns high up on the walls between the ornamental iron grilles of the clerestory windows.

The trust department will be housed on the mezzanine floor, where will also be found the directors' room. A novel feature of this installation will be the use of the flat tile roof outside the directors' room for a palm garden.

BOOK REVIEWS

"Drafting Room Practice," by Eugene Clute (formerly editor of "The Architectural Review" and of "Pencil Points"). The purpose of this book is to present a clear and systematic description of present-day drafting-room methods. It follows the progress of the program from the first sketches to the completion of plans and details, illustrating the subject in some 300 pages by reproductions of actual working drawings selected from a number of representative offices, with only so much text as seems indispensable.

So practical and well-edited a book should be extremely valuable in any drafting room.

"Drafting Room Practice," by Eugene Clute. Pencil Points Press, Inc., 419 Fourth avenue, New York. Price, $6.

* * *

"American Theatres of Today," by R. W. Sexton and B. F. Betts, associate editors, "The American Architect." The modern theater is a complex structure with many requirements calling for very special expert information. To present an outline of these subjects the present volume has been prepared, and combines a clear and systematic text with a large number of plates showing plans, sections, details, views of exteriors and interiors, to the extent of 175 large and well-printed pages. A book which should be quite as valuable to the architect securing a theater commission as the standard works on schools and hospitals have been in those subjects.

"American Theatres of Today," by R. W. Sexton and B. F. Betts. Architectural Book Publishing Co., Inc., 31 East Twelfth street, New York. Price, $12.50 net.

* * *

"New Trails in Old Spain," by Vernon Howe Bailey. The pencil drawings of Mr. Bailey are well known to architects for their delicate charm. Included in the 48 illustrations to his book are many done with the brush, which are also very attractive, but which lack the distinctiveness of the pencil work.

The text consists of personal traveling experiences and the drawings are for the most part of distant views of Spanish towns, very delightful as pictures but not of great inspirational value for the architect seeking knowledge of unfamiliar Spanish detail.

"New Trails in Old Spain," by Vernon Howe Bailey. J. H. Sears & Co., 114 East Thirty-third street, New York. Price, $3.50.

* * *

"The Smaller House of Today," by Gordon Allen, F. R. I. B. A. In this book, Mr. Allen, winner of the recent "Daily Mail" prize for the best £1,500 house, reviews recent types of smaller English houses and gives information concerning good design, construction and items which work for comfort and convenience. He also comments on financial matters, which naturally apply particularly to his own country. But over 200 illustrations are shown, which contain much that should prove interesting to architect and home owner in the United States.

"The Smaller House of Today," by Gordon Allen. Chas. Scribner's Sons, 597 Fifth avenue, New York. Price, $3.75.

* * *

"Drawing with Pen and Ink," by Arthur L. Guptill. Based on class work given by the well-known author at Pratt Institute and on his own experience as an illustrator, this treatise comes with considerable authority. It is profusely illustrated throughout its 430 pages, forming, as the introduction by Franklin Booth says, a veritable gallery of pen and ink art in its fine selections of work by masters of technique in many forms.

Starting with elementary chapters, the subject is handled systematically through gradual stages until every imaginable phase of complex or special work is treated. It is perhaps even more a work of reference than a text-book.

To architects who believe in presenting their designs pictorially this volume should be not only a guide but an inspiration.

"Drawing with Pen and Ink," by Arthur L. Guptill. Pencil Points Press, Inc., 419 Fourth avenue, New York. Price, $8.50.

* * *

COMPETITIONS FOR THE PRIX DE ROME

The American Academy in Rome has announced its annual competitions for fellowships in architecture, landscape architecture, painting and sculpture.

In architecture the William Rutherford Mead Fellowship is to be awarded; in landscape architecture the fellowship is provided by the Garden Club of America Fund; the fellowship in sculpture is supported by the Rinehart Scholarship Fund of the Peabody Institute of Baltimore, Maryland.

The competitions are open to unmarried men, not over 30 years of age who are citizens of the United States. The stipend of each fellowship is $1,500 a year for three years, with allowances of $500 for transportation to and from Rome and $150 to $300 for materials and incidental expenses. Residence and studio are provided at the academy, and the total estimated value of each fellowship is about $2,500 a year.

The Grand Central Art Galleries of New York City will present free membership in the galleries to the painter and sculptor who win the Rome prize and fulfill the obligations of the fellowship.

In architecture, graduates of accredited schools will be required to have had architectural office experience of six months, and men who are not graduates of such schools may enter the competition if they have had at least four years of architectural office experience and are highly recommended by a Fellow of the American Institute of Architects.

Entries for all competitions will be received until March 1st. Circulars of information and application blanks may be secured by addressing Roscoe Guernsey, executive secretary, American Academy in Rome, 101 Park avenue, New York City, N. Y.

INSTITUTE AND CLUB MEETINGS

Northern California Chapter, A. I. A.

The regular December meeting of the Northern California Chapter of the American Institute of Architects, falling on Christmas Day, was omitted. The next meeting will be held January 29th at the Hotel Mark Hopkins, for which special notices will be sent as usual.

* * *

Alameda County Society of Architects

A business meeting of the Society was held at the Athens Athletic Club, December 17, 1928.

Members present were: Gilkey, Reimers, Roeth, Olson, Miller, Yelland, Warnecke, Snyder, Foulkes, Froberg, Whitton, and Prof. Shephard.

The meeting was opened by Vice-President Bangs, who presided, President Corlett being ill.

The minutes of the previous meeting were approved as read.

Mr. Crawford of the Industrial Association gave a talk on the impartial wage board.

Mr. J. A. Hill spoke on certified heating for steam heat and hot water. According to Mr. Hill the Association of Heating Contractors check contractors' plans and installation. Hence, the first cost is the last cost to the owner.

A letter was read by the Secretary from Palos Verdes, regarding the use of California style of architecture instead of Mexican, Mediterranean, Spanish, etc.

Mr. Roeth gave a report of the meeting of the State Architects' Association of December 14. There was a large attendance at this meeting from various districts. A campaign was instituted to further the appreciation of good architecture, this work to start in high schools.

Mr. Roeth said that the question of educating ourselves to eliminate "bootleg" competition was also discussed. It was felt that we must work among ourselves to understand what architectural service is.

The payment of dues to the State Association is almost 100 per cent in the smaller communities, but in the larger communities is very poor. Dues are important.

There being no further business, the meeting adjourned.

* * *

The Los Angeles Architectural Club

In keeping with the spirit of festivity was the program presented to the members and guests of the Los Angeles Architectural Club on the evening of December 18, at the Artland Club.

Mr. Edward Langley, as master of ceremonies, gayly announced the numbers. Mr. M. C. Barnard, poet and journalist, gave two clever readings. And Mr. Frank Nightingale's baffling card tricks were the delight of everyone present. The principal speaker of the evening was Mr. Josef Swickard, prominent motion picture actor, whose many comic stories increased the general good spirits of the group.

Musical numbers gave a nice balance to the program. Selections by the quartet and solos by Norman Kelch and Ted Johns were enthusiastically received.

Mr. Roger Nobel Burnham was appointed to make the awards to the winners in the small-house competition, who were the guests of the Club at this meeting. The contest was conducted for students in the Department of Architecture at Polytechnic High School, by the Small-Home Plan Bureau, under the supervision of the Los Angeles Architectural Club.

William Horneck and Roy Djerf won first prize, which entitles them to one year's membership in the Los Angeles Architectural Club. Andrew Conze, who placed second, was awarded a year's subscription to the Architectural Digest. Jack Lipman, third prize winner, received a subscription to the Architect and Engineer for one year. And Harlan Sater won fourth prize with a year's subscription to California Home Owner. First mention went to Andrew Conze, second to Elsworth Phillips, and third to Jack Henry. The prizes for all of these were a year's subscription to PACIFIC COAST ARCHITECT.

Aside from the display of these prize-winning drawings, the greeting cards, submitted in competition by Club members, were also exhibited. The judges of this contest were H. Scott Gerity, Robert Lockwood and H. Roy Kelley. After a great deal of consideration and many mentions, the first prize was awarded to Donald Worster and second to Graham Latta. Those mentioned were Max Egen, Julian Garnsey, Conrad Buff and Donald Prouty. The first award was Guptill's "Drawing With Pen and Ink," and second was Guptill's "Sketching and Rendering in Pencil."

In connection with the three-day exhibition of the Twenty-first Paris Prize Drawings in the exhibit rooms of the Architects' Building, a dinner was given for the members of the Atelier-Los Angeles, on the evening of December 10th.

* * *

Washington State Chapter, A. I. A.

The regular December meeting of the Chapter, held at the College Club, Seattle, brought out a good attendance of members from Seattle and Tacoma, and the Chapter also entertained as its guest Mr. William G. Purcell of Portland, director of the Architects' Small-House Service Bureau, representing the North Pacific Division of the Bureau.

After an exchange of friendly greetings in the living-room of the Club, the usual dinner was enjoyed, and at its conclusion the meeting was called to order by President Ford. The minutes of the November meeting were read and approved, with some additions, and the report of the Treasurer was also read and accepted.

Brief reports from various committees was the next order of business. Mr. Gove, chairman of the Chapter

Committee on Legislation, in reporting relative to the proposal to improve the Architects' License Law of the State, said that his committee would like to ask three questions of the Chapter: Whether they believed the law should be revised, should the licensed architects of the State be asked to cooperate, and was the Chapter prepared to do the necessary financing? After some discussion it was voted that the committee draft amendments having the strengthening of the law in view, and submit these at a special Chapter meeting.

Mr. Vogel reported for the Committee on Public Information.

A letter was read from William O. Ludlow, chairman of the Institute Committee on Industrial Relations, referring to the giving of medals for craftsmanship. Mr. Willatsen was asked to present his views as a member of this institute committee. The discussion that followed led to a vote that giving of certificates for craftsmanship by the Chapter, as had been done two years ago, be again given consideration and that the Chapter committee make a report to the Chapter, so that further awards might be made at the next annual meeting.

The Nominating Committee then presented its report through its chairman, Mr. Thomas, of the nominations made for offices to be filled at the annual meeting. The report was as follows:

For president, Sherwood D. Ford; first vice-president, F. A. Naramore; second vice-president, Herbert A. Bell; third vice-president, G. Albin Pehrson; secretary, J. Lister Holmes; treasurer, A. M. Allen; executive committee, three years, Arthur P. Herrman; one year, A. H. Albertson; delegates to the Institute Convention, A. M. Allen, R. E. Borhek and Harland Thomas.

Mr. Purcell was then introduced as a director of the Architects' Small-House Service Bureau, who had stopped off to visit the Chapter on his return from a meeting of the board recently held in Chicago. Mr. Purcell spoke generally of the aims of the bureau to improve the quality of small-house architecture and of its specific value in advertising architecture and promoting the use of the architect's services.

Mr. Purcell's remarks brought about a valuable discussion of the work of the bureau, ending by the President thanking him for stopping in Seattle for our meeting and giving us the opportunity of listening to his interesting and valuable remarks. There being no further business, the meeting adjourned.

* * *

The San Francisco Architectural Club

Monthly business meeting held in the Club rooms January 2, 1929, with President Lawrence Keyser presiding at opening of meeting. After the reports for the year were read and accepted, installation of new officers, elected without opposition, took place as follows:

President, Harry Langley; Vice-President, Theodore Ruegg; Director, Waldon B. Rue; Secretary, F. A. Nielsen; Treasurer, David Kensit.

President Ex-Officio Keyser in his farewell speech announced to the Club that, in order to have the Club benefit by the training of past presidents, an advisory board would be created which would consist of ex-presidents only. The chairman of the board will be announced later when other details for its organization and approval of the Club members are obtained.

Mr. Keyser was presented with a watch fob as a token of appreciation for his services of the past year. The serious atmosphere at this point was broken into by the entertainment chairman, who presented Keyser with a Swiss cheese movement watch to go with the fob.

The incoming President, Mr. Harry Langley, in his inaugural address, decided that the past administration left entirely too many wrinkles that must be ironed out in the Club's problems. Just how he intends to make a new stretch was not stated. The newly elected Vice-President is shy on speeches and did not come to his own election. We are sure that Ted had an excellent alibi to miss such an event.

The retiring officers were given a standing vote of thanks for their labor of the past year.

With the election past history, the Club turned to other indoor sports such as is furnished by the Entertainment Committee, who announced a trip to the Washington Iron Works plant at Millbrae, January 19, 1929. The Club members who have signed up will leave the Club premises at 12:00 o'clock Saturday and will return the same afternoon. Busses will be furnished by the host of the day.

The chef of the evening furnished the usual hot dogs and coffee. Ed's term of kitchen police is over. No one notices the poor K. P.'s anyway, unless they have a kick coming. Ed. Martini's term in the gastronomic department was marked by a decided change for the better in the way of menus. He had something different each time and seemed to take a personal interest in serving it in an appetizing manner.

* * *

AWARDS FOR HIGH SCHOOL STUDENTS

Awards have just been made in the small-house competition, conducted for students in the Department of Architecture at Polytechnic High School by the Small-Home Plan Bureau, under the supervision of the Los Angeles Architectural Club.

William Horneck, of 4424 South Central avenue, won the first prize with a charming three-room house. The prize is a year's membership in the Los Angeles Architectural Club. Andrew Conze, of 414 E. 127th street; Jack Lippman, 231 South Arden boulevard, and Harlan Sater, of 825 South Townsend street, won second, third and fourth prizes, respectively.

First mention went to Andrew Conze, second to Elsworth Phillips, third to Jack Henry and honorable mention to Conrad Cornfeldt. Mention was also given to Claude Coates, Roy Djerf, Clarence Wapner, Earl Hern, Sam Fleishman and Albert Machado.

A jury composed of George P. Hales and Kemper Nomland from the Los Angeles Architectural Club, Roy Parkes from the Pasadena Architectural Club, Charles Kyson from the Architects' League of Hollywood and C. A. Faithful, head of the Department of Architecture at Polytechnic High School, judged the 160 entries. Their task was a difficult one, for the standard of work was very high. Most of the exterior designs and ingenious floor plans were decidedly professional in their expression.

In addition to the entries that received either awards or mentions, seventeen were chosen by the judges to augment the collection of the Small-Home Plan Bureau, where the working drawings will be sold, the returns to go to the students.

THE INSPECTOR

Building Regulation Looks Good for the New Year

Continues to Be a Lively Topic

BY MARK C. COHN
Expert Consultant on Housing and Building Regulations

[This is the forty-third of a consecutive series of articles on building and engineering regulations by this author.]

THE NEW YEAR seems destined to be filled with potential law making designed to regulate construction of buildings and kindred businesses and professions. As this article is being written, State legislators of California are getting ready for the regular biennial trip to the State Capitol at Sacramento, where the California Legislature convenes in January of every odd-numbered year.

The doings of the State solons will probably attract the attention of the building fraternity for the first four months of the new year if all measures under discussion over the past few months take the form of bills put before the legislators.

The regulation of professional engineering and professional engineers is bound to be before the State lawmaking body again. A bill to create a State board of engineers empowered and authorized to register, examine and license professional engineers is being sponsored by the California Engineers' Registration Association.

The proposed engineers' bill seems to have much better organized support than it mustered in previous sessions of the Legislature. According to Pecos H. Callahan, secretary of the California Engineers' Registration Association, approximately 750 engineers have joined in the movement and very gratifying support is being received from every section of the State. Mr. Callahan further observes that the movement is one for engineers by engineers and asserts in substance that the board of directors would appreciate cooperation from every branch and society of engineers in the State, to the end that the bill to be recommended before committees of the Legislature shall be one that will work no hardship on anybody.

Architects, too, have long discussed ways and means of offering amendments to the State act regulating the practice of architecture with a view of strengthening that measure and to make it effective in order that the spirit and intent behind the bill may be carried out in the public interest. The recently organized association of California architects might operate to produce the desired results this year.

Amendments to the State Housing Act, introduction of a State bill to regulate sanitary plumbing and gas piping work and registration and licensing of master and journeymen plumbers are other measures that may appear in bill form during the January session of the California Legislature.

Licensing of building contractors and a measure that would require filing of "notice of intention to build" have been the subject of discussion among builders for more than a year and, with the cooperation of manufacturers of building materials and dealers in these products, requisite bills might be introduced for consideration by the Legislature.

To get away from the Legislature, it might be observed that the California Standard Building Code sponsored by the California Development Association is reported to be progressing, although it is hardly to be expected that this work will be finished before the new year is well on its way. The California Standard Building Code detail work is being carried on by a technical executive committee composed of architects, engineers and contractors chosen from the California section of the American Society of Civil Engineers, California Chapters of the American Institute of Architects and the Associated General Contractors of Northern and Southern California. The Building Inspectors' Conference also recently joined the California Development Association committee for the writing of the new code which is to be recommended for adoption in cities of California.

Los Angeles is actively working on its new proposed building code, which is being handled as an entirely separate measure and apart from other code movements. The modernization and codification of all laws pertaining to the regulation of building in Los Angeles is being done under auspices of the Municipal Board of Building and Safety Commissioners. In this work, the Builders' Exchange of that city is taking active leadership, to the end of centralizing activities in its headquarters as an aid to the municipal authorities.

Master painters seek to have passed local ordinances designed to regulate the business of painting contractors. Plastering contractors, electricians, roofers and mason contractors, too, are fostering ordinances looking to the regulation of their particular branches of work in building construction and for the establishing of licensing and bonding of those who engage in these businesses.

Kelso, Washington, plans to revise its city building

code with particular reference to the construction of chimneys. W. H. Richardson, city building inspector, plans soon to offer the code changes to the city council. And an ordinance recently adopted in Hillsboro, Oregon, empowers the city council to condemn dangerous structures.

A State building code and a law for the regulation of schools are measures pending for the consideration of the Washington State Legislature. Vancouver, Washington, too, is again to discuss the adoption of adequate building laws.

Oxnard recently adopted an ordinance that creates a board of building condemnation which would have power to act on structures constituting a menace to public safety. The mayor, the fire chief and the building inspector constitute the board. In the same city, a new ordinance, No. 176, is now effective and requires that brick and other masonry and noninflammable materials only shall be used in the construction of new buildings within the city fire limits, which have been enlarged.

Martinez is another California city that has recently established enlarged fire districts and adopted a new building code which is now effective. In Santa Barbara a proposed new electrical ordinance is before the city council.

The Tujunga city council has taken the first steps toward the adoption of a building code by instructing the city attorney to prepare a draft of an ordinance that would cover electric wiring and plumbing as well as building; and by amendment to an ordinance it is intended to charge a license fee of $50 per year from all contractors engaged in the business of electric wiring and plumbing.

Oh, yes! The business of building code making promises to be a good one for 1929.

* * *

L. A. BUILDERS' EXCHANGE IN NEW OFFICES

Ground floor offices with entrance from Hill street and the main lobby of the Chamber of Commerce building are new headquarters of the Los Angeles Builders' Exchange. Removal of the Exchange offices from 656 South Los Angeles street to the new location, according to Mano Zan, secretary-manager of that organization, accomplishes one thing that the Exchange has been trying to do, namely, to make its offices readily accessible to the general public. Mr. Zan also says that the new offices bring together building craft organizations into closer contact with various trade organizations already housed in the Chamber of Commerce building.

* * *

At the American Hospital Association meeting in San Francisco, August, 1928, Mr. Myron Hunt, architect of Los Angeles, and Mr. William G. Corlett, architect of Oakland, were featured speakers. Mr. Corlett's paper, "How to Evaluate a Hospital Site," was reprinted in "The Modern Hospital" for October, 1928, and received many favorable comments.

* * *

W. C. Churchill, formerly local building contractor in Brea, California, has been appointed building inspector of that city, succeeding Ross Lee, who resigned the post.

BOOK REVIEW

"*Stevens' Master Specifications*," by Frank B. Stevens, Jr., structural consultant of Chicago.

This volume, consisting of 608 loose-leaf pages, thoroughly indexed and handsomely bound, is now being distributed to engineers and registered architects throughout the United States. This volume aims at a certain standardization of open competitive specifications for all types of modern buildings, and puts before the architect complete data essential to the proper description of his drawings.

Its purpose is to assist the architect or engineer in avoiding duplication and omission, simplifying contracts, preventing misunderstandings with contractors, and abetting the speed and efficiency of construction.

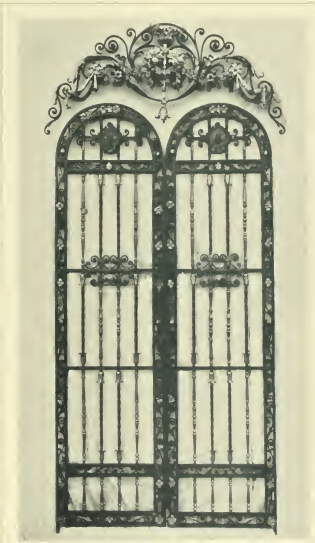
Copies of the specifications can be obtained from Mr. Stevens at 159 North State street, Chicago, Illinois.

* * *

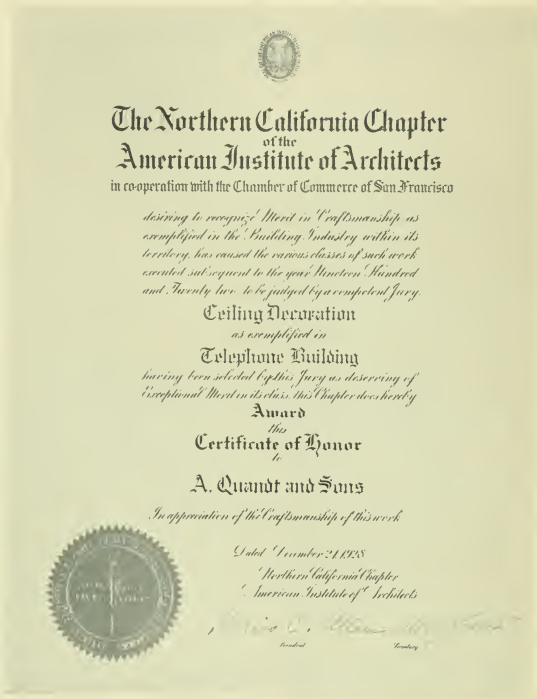
Arthur Harris, representative of the Heintz Roofing Tile Company, has established offices and warehouses at 3659 Council street, Los Angeles.

* * *

Architect Palmer Sabin announces the removal of his offices to 170 East California street, Pasadena, Calif.



Wrought-Iron Doorway



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An Improved Type of Reinforced Bands for Masonry Structures

BY SEWARD C. SIMONS
Secretary-Manager Clay Products Institute of California

FOR several years it has been the practice of some California architects and engineers to require a continuous band or tie, sometimes called a "bond-stone," at floor and roof levels in certain types of buildings having walls of unit masonry construction. The object of this tie is to act in tension to resist the angular compressive stresses in the wall and to distribute such stresses throughout the entire structure. It also provides an excellent point to rest the floor and roof joists and to distribute their thrust or their battering effect in the case of such horizontal forces as set up in an earthquake.

While it can be readily shown, both by engineering analysis and a study of the experience in earthquakes, that most brick buildings will be fully adequate to resist such shocks, if they are built with good mortar and have their joists properly tied and anchored, nevertheless there are sometimes conditions of design which make desirable some form of reinforcement at the corners of the building, and in any event, if such a tie can be put into the building without serious cost or without producing unfavorable conditions in the structure itself, it is undoubtedly an added factor of safety.

The type of continuous tie or bond-stone which has been most generally used has been a 12-inch band of reinforced concrete, reinforcement generally consisting of four one-half inch diameter round reinforcing bars. The concrete bond-stone, however, has a number of serious objections which have limited its use and in fact have rendered it frequently of doubtful utility. Among these objections may be noted the following:

1. The work of the brick-masons has to be interrupted and another class of labor employed to set the forms and the steel and generally another to pour the concrete. After the concrete is in place it should be permitted to set for at least two days, preferably for a longer period, thus interrupting the whole plan of the building construction and adding materially to the indirect cost.

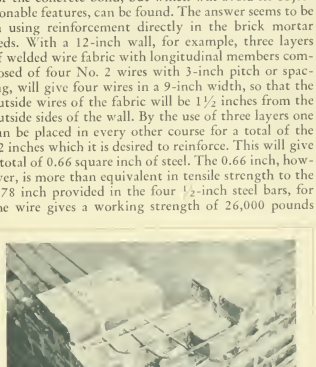
2. Unless constructed with the greatest care, which involves additional expense, the poured concrete will slop through on the exposed brick face, from which it is almost impossible to remove it. Thus to make a good-looking job the brick must be stuccoed or otherwise finished at a considerable increase in cost. Even if this difficulty is minimized by careful work, it is almost inevitable that a certain amount of patching of the concrete band will be necessary after the removal of the forms, and this causes an unsightly effect.

The bond-stone is sometimes arranged with an outside course of brick which to some extent limits the unsightly features above referred to, but involves additional time and cost.

3. The cost of the concrete bond-stone is considerable. In a four-story brick building with bonds at the second, third, fourth and roof joist levels, it is about $530 more than the straight brickwork would have cost, which is an appreciable percentage upon the total of such a building.

4. Perhaps the most serious objection is the likelihood that, with two dissimilar materials such as concrete and brick masonry, there will be a failure in the bond through difference in expansion or shrinkage, which will defeat the entire purpose of the construction. Concrete hardening in air has a shrinkage value of about 0.0004. In other words, in a building 100 feet long, the shrinkage would be approximately 0.04 foot, or about one-half inch. The brick masonry adjacent to this concrete will not have this shrinkage. Consequently the two sections of the wall will be broken in minute cracks in a large number of places. The converse condition takes place in the portion of the wall laid immediately above the bond-stone, for as the mortar sets it will shrink within the length of each brick, and again cause an unsatisfactory bond with the concrete below.

The question then naturally arises as to whether a type of construction which will gain the ends desired for the concrete bond, but which will avoid its objectionable features, can be found. The answer seems to be in using reinforcement directly in the brick mortar beds. With a 12-inch wall, for example, three layers of welded wire fabric with longitudinal members composed of four No. 2 wires with 3-inch pitch or spacing, will give four wires in a 9-inch width, so that the outside wires of the fabric will be 1½ inches from the outside sides of the wall. By the use of three layers one can be placed in every other course for a total of the 12 inches which it is desired to reinforce. This will give a total of 0.66 square inch of steel. The 0.66 inch, however, is more than equivalent in tensile strength to the 0.78 inch provided in the four ½-inch steel bars, for the wire gives a working strength of 26,000 pounds



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per square inch, or a total of 17,200 pounds, whereas the reinforcing bars cannot be allowed more than 18,000 pounds or a total of 13,040.

The efficiency of the reinforcing, however, is determined largely by the bond that can be obtained, as the full tensile strength of the steel can hardly be called on. The bond, of course, depends chiefly on the surface of the steel employed. The three layers of fabric give 10 square inches surface per inch of length, whereas the four ½-inch round bars give only 6.3 inches of surface.

In considering this type of continuous tie in comparison to concrete, it will be at once noticed that it entirely does away with the first two difficulties mentioned as to the latter type. The work is done entirely by the brick-mason, without interruption, as the fabric can be obtained directly from the steel companies, cut to the right width, and need only be laid on the mortar beds. No delay is involved either in the construction or in waiting for the concrete to set. There is also, of course, no difficulty as to appearance, as the brickwork in every way is standard.

The matter of cost is also a great advantage in favor of the reinforced brickwork, as practically the only additional expense would be the steel, which can be obtained delivered on the job for about 14 cents per lineal foot of 12-inch band for the three layers. Thus the additional cost would only be about one-half that of the concrete. The following table makes this clearer:

TABLE I

COMPARATIVE COSTS OF REINFORCING BANDS FOR BRICK BUILDINGS

Per Lineal Foot

Concrete		*Brick*	
"13-inch Walls"			
Concrete—1 1/12 cu.ft. @ 36	39	Brick @ $25.00 M, 18b	45
Forms—2x15c	30	Extra cost cement mortar	2
Steel—4x.85x4.5	15.3	Steel and placing	15
	84.3c		62c
Added cost over plain wall, 39.3c. Added cost over brick band, 22.3c.		Added cost over plain wall, 17c.	
17-inch walls			
Concrete		*Brick*	
Concrete—1 5/12x36c	51	Brick @ $25.00x24	60
Forms—2x15	30	Cement mortar	3
Steel	15.3	Steel	15
	96.3c		78c
Added cost over plain wall, 36c. Added cost over brick band, 18.3c.		Added cost over plain wall, 18c.	

To those to whom the idea of reinforcing in brickwork is a novelty, it may be well to point out that the bond developed between the mortar and the steel is fully as high as or higher than between the concrete and the steel. It is considered advisable to use a one-to-three cement mortar for the bond-stone or bond course with enough lime or diatomaceous earth to give workability. The expansion between the materials of different character is of course eliminated.

One reason for the better bond with the cement mortar as compared to the concrete is the lower water-cement ratio of the former.

The corners of the building, which are the points at which any earthquake stress is likely to be noticed most seriously, present a particularly favorable aspect of the proposed construction. The mesh is folded on itself so that each of the longitudinal wires has a right angle. The mesh should be arranged so that there is a continuous stretch of several feet from the corner in each direction. A very fine bond will be developed in this way, and any stress which might be set up in the corners carried well back into the entire wall. The method of laying the mesh permits the brick-layer to set his outer course of bricks, particularly the corner brick, without interference from the mesh, and makes it possible to get just as neat and regular a joint on the corners as without it.

The construction will become evident from the photographs of an actual corner of a wall laid up under supervision by the students of the Frank Wiggins Trade School, Los Angeles. Several of the outer courses of brick have been removed so as to show the way in which the wires lie. It will be seen that the joints are regular both at the mortar beds containing the mesh and below them. No difficulty whatever was experienced in laying up this wall and the mesh was readily bent by hand to the desired shape.

Where it is necessary to lap mesh in any part of the wall a lap of 12 inches will develop the tensile strength of the members. It is suggested that in these places the fabric be cut so that the transverse welded wires (which are at 16-inch intervals in the mesh suggested) of the first strip of fabric will be overlapped by the similar wire on the next strip, thus giving an additional mechanical bond which will be very secure. This mechanical bond of the transverse wires is an additional strength throughout this construction which has not been used in the computations, but will insure a particularly strong construction.

The comparative costs of this class of reinforcement may be summarized in Table II.

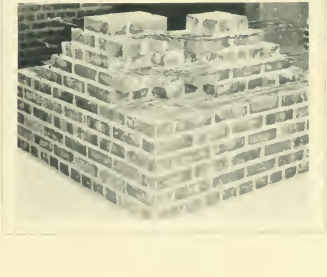
COST OF BAND IN FOUR-STORY BUILDING IN ADDITION TO COST OF PLAIN WALLS
(Los Angeles Ordinance—wall thickness)

Perimeter taken at 375 feet.

Concrete		*Brick*	
Thickness	*Extra cost per floor*		
12 in. @ 39.3c	$145.50	@ 17c	$ 63.75
16 in. @ 36	134.00	@ 18	67.50
16 in. @ 36	134.00	@ 18	67.50
20 in. @ 33	124.87	@ 18	67.50
	$538.37		$266.25

Showing direct saving with brick $272.12, over 50 per cent, not counting indirect savings due to continuous operations of the masons.

It must not be thought that the construction recommended is without extensive precedent. It is stated that



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practically similar reinforcement has been in use on government buildings for many years, including the appraisers' stores and Fontana warehouses in San Francisco, which went through the earthquake undamaged, and wire-mesh cloth has been used in much government brick construction.

In those instances where it is impracticable to obtain the mesh specified or its equivalent, the usual reinforcing bars can be employed with entire satisfaction. If ⅜-inch round bars are used, the same cross-section of steel to the four ½-inch bars used with concrete will be obtained by using 7 bars, say, 4 in the mortar bed at the bottom of the band and 3 in the bed at the top. The bond with the mortar will be better than with the concrete, because of a surface of 8.25 square inches per inch of length as against 6.3 with the four ½-inch bars. If ¼-inch bars are desired, 16 will be required, and will have a surface area of 12.55 square inches per inch of length.

The use of a continuous tie then is entirely feasible and satisfactory when worked out with suitable reinforcement placed directly in the brickwork, and the most practical and least expensive form of such reinforcement appears to be in the wire mesh above described. No calculations which have been made indicate the necessity for any greater reinforcement than this amount, even in the thicker walls of taller buildings, but should any special strains be contemplated, it is, of course, an easy matter to increase the amount of steel to take care of them.

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